



COMMONWEALTH OF MASSACHUSETTS
EXECUTIVE OFFICE OF ENERGY & ENVIRONMENTAL AFFAIRS
DEPARTMENT OF ENVIRONMENTAL PROTECTION
WESTERN REGIONAL OFFICE

436 Dwight Street • Springfield, Massachusetts 01103 • (413) 784-1100

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Governor

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Lieutenant Governor

IAN A. BOWLES
Secretary

LAURIE BURT
Commissioner

February 4, 2008

William B. Hull
Russell Biomass, LLC
101 Hampton Road
Pomfret Center, CT 06259

RE: **Russell** – WMA
Russell Biomass Facility
WMA permit application #: **9P2-1-04-256.04**
WMA Permit application (WM03)
Transmittal #W077973

Dear Mr. Hull:

Please find attached the following:

- DRAFT Water Management Act Permit #9P2-1-04-256.04 for Russell Biomass, LLC's proposed withdrawal from the Westfield River watershed, Russell, Massachusetts; and
- DRAFT Findings of Fact in Support of the Final Permit Decision.

Please review the draft permit. If you have any questions regarding the draft permit prior to final issuance, please contact Jim Bumgardner at (413) 755-2270.

Respectfully,

Deirdre Cabral, Section Chief
Drinking Water Program
Bureau of Resource Protection

File Name: Y:\DWP Archive\WERO\Russell-WMA DRAFT Permit 9P2-1-04-256-04-2008-02-04
WERO File: W:\brp\ws\WMA\Permits\Area 2\Russell Biomass\DRAFT Russell Biomass Permit.doc

CERTIFIED MAIL: 7007 0710 0003 2181 2162



cc: DWP/Boston Office (no attachment); Jim Bumgardner, WMA, WERO; David Howland, WERO;
Brian Harrington, Deputy Regional Director, DEP WERO
Rebecca Sherer, P.E., Tighe & Bond
Board of Selectmen, Russell, MA
Pioneer Valley Regional Planning Commission, 26 Central Street, West Springfield, MA 01089
Holyoke Water Works, 20 Commercial Street, Holyoke, MA 01040
Texon USA, 1190 Huntington Road, Russell, MA 01071
The Olde Farm Golf Club LLC, 65 Sunnyside Ranch Road, Southwick, MA 01077
Woronoco Realty Company, P. O. Box 385, Russell, MA 01071
Springfield Water Department, 36 Court Street, Springfield, MA 01101
Westfield Water Department, 59 Court Street, Westfield, MA 01085
West Springfield Water Department, 27 Central Street, West Springfield, MA 01089
John S Lane & Son Inc., P.O. Box 125, Westfield, MA 01086
Southworth Company, 265 Main Street, Agawam, MA 01001
Russell Water Department, P. O. Box 131, Russell, MA 01071
Southwick Water Department, 11 Depot Street, Southwick, MA 01077
Huntington Water Department, Town Hall, Huntington, MA 01050
Thomas W. French, Ph.D, DFWELE, Misty Ann Marold, NHESP, Caleb Slater, DFWELE
Duane LeVangie, DEP Boston (email)
Henry Warchol, 2 Sackville Avenue, Westfield, MA 01085
Robin L. Unger, 240 Frog Hollow Road, Russell, MA 01071
John & Jana Chicoine, P.O. Box 482, Russell, Mass 01071
Sarah Underwood, 249 City View Blvd., Westfield, MA 01085
Mike and Claudia Hurley, 25 Ridgecrest Circle, Westfield, MA 01085
Laurie A. Protono and Christopher Davis, 50 Country Club Drive, Westfield, MA 01085
Curt Freedman, C.M.F. Engineering, 24 Ridge Road, Longmeadow, MA 01106
Edward Ziskowski, 34 Northridge Road, Westfield, MA 01085



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**DRAFT Findings of Fact in Support of the Permit Decision
Water Management Permit 9P2-1-04-256.04**

The Massachusetts Department of Environmental Protection (MassDEP) has completed its review of the Russell Biomass, LLC, ("RBM") Water Management Act permit application to authorize withdrawal from the Westfield River Basin from its Russell Biomass Facility ("RBF").

Russell Biomass, LLC applied for a Water Management Act permit as part of its development of a wood-fired electric power generation facility. In response to RBM's application, and after reviewing the information that RBM has provided, MassDEP hereby approves the Water Management Act Permit 9P2-1-04-256.04 (the Permit) in accordance with the Act. MassDEP makes the following Findings of Fact in support of the attached Permit, and includes herewith its reasons for approving the Permit and for conditions of approval imposed, as required by M.G.L. c. 21G, § 11 and 310 CMR 36.00.

The Water Management Act

The Act requires that MassDEP issue permits that balance a variety of factors including:

- Reasonable protection of existing water uses, land values, investments and enterprises;
- Reasonable conservation consistent with efficient water use;
- Reasonable protection of public drinking water supplies, water quality, wastewater treatment capacity, waste assimilation capacity, groundwater recharge areas, navigation, hydropower resources, water-based recreation, wetland habitat, fish and wildlife, agriculture, flood plains; and
- Reasonable economic development and job creation.

Findings of Fact Pertaining to WMA Policy for Issuing New Permits to Industrial Users

As required by M.G.L. c. 21G, § 11 and 310 CMR 36.00, MassDEP makes the following Findings of Fact in support of the Permit, and includes herewith its reasons for approving the Permit and for imposing the conditions of approval.

In establishing the special conditions in Water Management permits, MassDEP reviews available research and reports by the United States Geological Survey, MassDEP's Watershed Water Quality Assessment Reports and any other pertinent reports available for specific river basins for establishing the special permit conditions, specific to each permit.



Streamflow Characteristics

The RBF surface water withdrawal point is a diversion from the Westfield River. The diversion is located in a portion of the Westfield River Basin that is identified as a low stress basin by the WRC's Stressed Basins Report. The map of stressed basins can be reviewed at the following link:

<http://www.mass.gov/dep/water/laws/policies.htm#wmgt> under "Water Management Policies", Flow Stress Map. The Westfield River watershed area above the withdrawal diversion is 342 square miles. Table 1 summarizes the streamflow characteristics and compares them to the withdrawal volume.

	Flow in cubic feet per second (cfs)	Withdrawal Percentage
Maximum Withdrawal Rate	1.37	100%
Aquatic Base Flow (ABF)¹	171	0.8%
August Median	104	1.3%
7Q10	33.6	4.0%
Lowest Single Day Observation	17.8	7.7%

Table 1: Comparison of Withdrawal with Streamflow Characteristics

Other Basin Withdrawals

Table 2 is a compilation of all currently authorized withdrawals within the Westfield Basin, both upstream and downstream of the proposed withdrawal.

<i>Facility Name</i>	<i>Permit Number</i>	<i>Registration Number</i>	<i>Permitted Volume (MGD)</i>	<i>Registration Volume (MGD)</i>	<i>Total Authorized Withdrawal (MGD)</i>	<i>Orientation</i>
Springfield Water Department		10428101	0	39.1	39.1	Downstream
West Springfield Water Department	9P10432501	10432503	2.82	3.89	6.71	Downstream
Westfield Water Department		10432901	0	6.11	6.11	Downstream
Tower Erving LLC	9P210709101	10719201	0	1.88	1.88	Downstream
Holyoke Water Works		10413701	0	1.01	1.01	Downstream
Southwick Water Department	9P10427901	10427905	0.28	0.45	0.73	Downstream
Texon USA	9P210425603		0.721	0	0.721	Upstream
John S Lane & Son Inc	9P210432901		0.65	0	0.65	Downstream
Russell Water Department	9P210425602	10425601	0	0.29	0.29	Upstream and Downstream
Southworth Company		10432501	0	0.15	0.15	Downstream
The Olde Farm Golf Club LLC	9P10427902		0.146	0	0.146	Downstream
Huntington Water Department		10414301	0	0.12	0.12	Upstream

Table 2: Authorized Withdrawals in the Westfield River Basin in Relation to the Proposed Withdrawal

¹ Based on an Aquatic Base Flow factor of 0.5 cfs/m.

Findings of Fact for Special Permit Conditions

In issuing permits, MassDEP looks at site-specific impacts and other issues specific to the hydrologic system near the withdrawal, such as impacts to nearby streams, wetlands, or other water users, justification of long-term demand projections, alternatives to the proposed withdrawal, and the capacity of permitted withdrawal points. The conditions are intended to ensure the efficient use of water and to mitigate the potential impact of withdrawals.

Special Condition 1, Maximum Authorized Annual Average Withdrawal Volume: This condition authorizes the requested maximum annual average withdrawal volume of 0.662 mgd through November 30, 2012. MassDEP has determined that the requested volume will not have significant or detrimental effects on the Westfield River streamflow, based on the streamflow analysis submitted by the applicant, and its own internal review of the site hydrology and magnitude of the proposed withdrawal. The applicant has submitted information sufficient to conclude that the projected maximum daily withdrawal of 0.885 mgd will not have a significant effect on the Westfield River streamflow². The projected maximum daily withdrawal is 7.7% of the lowest streamflow on record² (17.8 cfs), observed after the construction of Littleville Dam. This is the worst-case scenario with respect to streamflow impacts of the withdrawal. Table 1 summarizes the relative impacts of the RBF withdrawal on the 7Q10 and August median flows.

An analysis of cumulative impacts from all authorized withdrawals upstream of the proposed withdrawal results in a similar finding. Table 3 illustrates the cumulative impact due to all authorized withdrawals upstream of RBF. The combined withdrawals, post-approval would be 9% of the 7Q10 and 1.5% of the August median streamflow. Because the withdrawal constitutes very low percentages of the critical low streamflow statistics, MassDEP concludes that with the restrictions included in the permit conditions, the combined withdrawals upstream and at the point of withdrawal will not have detrimental effects on the Westfield River.

Westfield River Lowest Streamflow on Record	17.8 cfs
Westfield River 7Q10 at RBF	33.6 cfs
Westfield River August Median	213 cfs
Total Existing Upstream Withdrawals ³	1.8 cfs
RBF Withdrawal (max day)	1.4 cfs
Combined Withdrawals	3.2 cfs
Combined Withdrawals % of Lowest Streamflow	18%
Combined Withdrawals % of 7Q10	9%
Combined Withdrawals % of August Median	1.5%

Table 3: Assessment of the Potential for Post-Approval Cumulative Impacts

² For permitting purposes, the streamflow history at RBF is based on the time series of the sum of streamflows at three upstream USGS streamflow gages; 1179500 – Knightville; 1180500 – Westfield River; and 1181000 – West Branch, Westfield River, observed after Knightville and Littleville dams were constructed.

³ This value includes the withdrawal from the Strathmore Park Well in Russell that is a short distance downstream. The Strathmore Park well is included because the Russell Water Department authorized withdrawal is aggregated from sources both upstream and downstream of the proposed RBF withdrawal.

An analysis of the impacts of the RBF withdrawal on other withdrawals in the Westfield River Basin (downstream) results in a similar conclusion, i.e. the withdrawal will have little or no effect on the existing permitted or registered withdrawals. Essentially, downstream users will not be affected by the RBF withdrawal because the streamflow impacts at the point of withdrawal are minimal, as has been shown previously.

An expanded alternatives analysis was submitted in response to an Order to Complete issued by MassDEP. The applicant asserts that only proven technologies are acceptable for consideration. Therefore only the air-cooled and water-cooled technologies were evaluated in detail. The combined air/water-cooled technology was considered to be unproven technology and was not included in the alternatives analysis. The expanded alternatives analysis showed that the costs of air-cooling technology included loss of plant efficiency and performance, especially during peak seasonal demand, resulting in losses of \$36.8 M in revenue, increased capital costs of \$9.5 M, losses of Renewable Energy Credits of \$11.7M and lost Federal production tax credits of \$1.1M.

Based on the results of the alternative analysis, MassDEP concludes that, although using air-cooled technology appears to be technically feasible at RBF, the costs of construction, operation, and maintenance of air-cooled technology, over the design life of the facility, outweigh the benefits of avoiding the proposed withdrawal for water-cooled technology in this case.

Special Condition 2, Maximum Authorized Daily Withdrawals from each Withdrawal Point. The maximum authorized daily withdrawal is specified in the permit application at 0.885 mgd. This value was specified in the application as the maximum daily withdrawal requested by RBM. Because aquatic impacts are most critical when the withdrawal is at its maximum, and the fact that the maximum daily withdrawal will likely happen at times of low streamflow, MassDEP is requiring daily withdrawal volume monitoring between July 1 and October 1 and reporting of the maximum daily withdrawal volume on the Russell Biomass, LLC annual statistical report for its Water Management Act permit.

MassDEP finds that RBM shall not cause the Westfield River streamflow to fall below the lowest observed streamflow of 17.8 cfs, based on three upstream USGS streamflow gages, according to the following methodology:

When $Q_{\text{upstream}} \leq 19.2^4$ cfs: $Q_{\text{Maximum}} = Q_{\text{upstream}} - 17.8$ cfs [units are cubic feet per second]

Q_{upstream} is defined as 24 hour running average sum of “real-time” streamflow observations from three USGS gages upstream of the withdrawal point in cubic feet per second. Q_{upstream} is to be calculated once every four hours using observations from each of the three upstream streamflow gages operated by USGS; 1179500 – Westfield River at Knightville; 1180500 – Middle Branch, Westfield River; and 1181000 – West Branch, Westfield River. Q_{Maximum} is defined as the maximum authorized withdrawal rate in cubic feet per second. This condition shall be in effect between July 1 and October 1 of each year. The period where this condition is in effect is limited because low streamflow is not expected between October 1 and June 30 and Russell Biomass is not required to monitor streamflow for purposes other than detection of extremely low streamflow.

A daily withdrawal, greater than the sum of the three upstream streamflow gages minus 17.8 cfs, is not authorized by this permit and is prohibited by the regulations at 310 CMR 36.28. This means that the RBM withdrawal shall be less than or equal to 0.885 MGD when the sum of the upstream gages equals 19.2 cfs, and RBM shall decrease its withdrawal accordingly when the streamflow is between 19.2 cfs and 17.8 cfs such that its withdrawal is less than or equal to the sum of the upstream gages minus 17.8

⁴ 19.2 cfs is the lowest observed streamflow (17.8 cfs) plus the maximum daily withdrawal rate of 1.4 cfs.

cfs. No withdrawal is permitted when Q_{upstream} is less than 17.8 cfs, calculated from the “real time” observations every four hours.

Observation of the real-time data, reported by USGS at the three upstream streamflow gages every four hours, is required whenever the previous day’s average streamflow value (Q_{upstream}) is less than 22 cfs. All observations of streamflow and the results of streamflow calculations pursuant to determining compliance with this condition shall be available for review by MassDEP representatives at any time and shall be included in the Annual Statistical Report (ASR) submitted by RBM.

As part of the permitting process, RBM’s consultant, Tighe & Bond Engineers submitted a “Review of Streamflow for Operational Issues and Draft WMA Permit Guidance” to give MassDEP some insight into what types of conditions would be practical to implement when requiring operational deviation due to streamflow. The Guidance submitted was considered in developing the elements of this condition, particularly the frequency of streamflow monitoring during low flow periods.

Special Condition 3, Water Conservation Requirements. No standard water conservation measures exist for a facility such as Russell Biomass. Most of the water used in the facility is essential to the core business function and is essentially evaporated. Nonetheless, MassDEP requires Russell Biomass, LLC to develop a water conservation plan that evaluates all areas of water use throughout its facility. The water conservation plan shall specify conservative techniques for each area of water use. Other types of water use that could benefit from water conservation measures include facility dust control or irrigation of the RBF fuel stockpile.

Special Condition 4, Metering. All water withdrawn under Water Management Act permit authorization is required to be metered to within an accuracy of +/- 2.5%.

Special Condition 5, Requirement to Report Raw and Finished Water Volumes. This condition ensures that the information necessary to evaluate compliance with the conditions included herein is accurately reported.

Special Condition 6, Wastewater Discharge Permit. Russell Biomass has applied for a National Pollutant Discharge Elimination System (NPDES) permit for its wastewater discharge. That permit is currently under review by MassDEP and the United States Environmental Protection Agency (USEPA). Russell Biomass shall not withdraw water in volumes that exceed the WMA threshold from its authorized withdrawal point without a valid NPDES permit for wastewater discharge to the Westfield River in Russell, Massachusetts.

The summary of permit conditions above as part of MassDEP’s findings of fact is not intended to, and should not be construed as, modifying any of the Permit conditions. In the event of any ambiguity between the summary and the actual permit conditions, the Permit language shall be controlling.



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This permit is issued pursuant to the Massachusetts Water Management Act (the Act) for the sole purpose of authorizing the withdrawal of a volume of water as stated herein and subject to the following special and general conditions. This permit conveys no right in or to any property beyond the right to withdraw the volume of water for which it is issued. This permit does not authorize withdrawal above any existing deeded water withdrawal restrictions.

PERMIT NUMBER: 9P2-1-04-256.04 **RIVER BASIN:** Westfield

PERMITTEE: Russell Biomass, LLC
101 Hampton Road
Pomfret Center, CT 06259

ISSUANCE DATE: *DRAFT*

EXPIRATION DATE: November 30, 2012

NUMBER OF WITHDRAWAL POINTS: 1

Groundwater: 0
Surface Water: 1

USE: Industrial

DAYS OF OPERATION: 365

LOCATION:

Table 1: Withdrawal Point Identification

Name	Location
Westfield River Diversion	72° 51' 0.41"W 42° 11' 16.132"N

SPECIAL PERMIT CONDITIONS**1. Maximum Authorized Annual Average Withdrawal Volume**

This permit authorizes Russell Biomass, LLC (“RBM”) to withdraw water from the Westfield River Basin at the rate described below in Table 2 from the withdrawal point identified in the application. RBM does not have a Water Management Act registration. The permitted volume is expressed both as an annual average daily withdrawal rate (million gallons per day or mgd), and as a total annual withdrawal volume (million gallons per year or mgy) for each five-year period of the permit term.

The Department of Environmental Protection (MassDEP) bases these withdrawal volumes on the raw water withdrawn from the authorized withdrawal point, and will use the raw water amount to assess compliance with the registered and permitted withdrawal volumes.

Table 2: Maximum Authorized Withdrawal Volumes

5-Year Periods		Total Raw Water Withdrawal Volumes			
		Permit		Permit + Registration	
		Daily Average (MGD)	Total Annual (MGY)	Daily Average (MGD)	Total Annual (MGY)
Period Four Years 16-20	<i>Issuance Date to</i> 11/30/2012	0.662	241.6	0.662	241.6

2. Maximum Authorized Daily Withdrawals from the Withdrawal Point

Withdrawals from individual withdrawal points are not to exceed the approved maximum daily volumes listed below in Table 3 without specific advance written approval from MassDEP.

MassDEP finds that RBM shall not cause the Westfield River streamflow to fall below the lowest observed streamflow of 17.8 cfs, based on three upstream USGS streamflow gages, according to the following methodology:

Whenever $Q_{\text{upstream}} \leq 19.2$ cfs: $Q_{\text{Maximum}} = Q_{\text{upstream}} - 17.8$ cfs [units are cubic feet per second]

Q_{upstream} is defined as 24 hour running average sum of “real-time” streamflow observations from three USGS gages upstream of the withdrawal point in cubic feet per second. Q_{upstream} is to be calculated once every four hours using observations from each of the three upstream streamflow gages operated by USGS; 1179500 – Westfield River at Knightville; 1180500 – Middle Branch, Westfield River; and 1181000 – West Branch, Westfield River. Q_{Maximum} is defined as the maximum authorized withdrawal rate in cubic feet per second. This condition shall be in effect between July 1 and October 1 of each year. The period where this condition is in effect is limited because low streamflow is not expected between October 1 and June 30 and Russell Biomass is not required to monitor streamflow for purposes other than detection of extremely low streamflow.

Observation of the real-time data, reported by USGS at the three upstream streamflow gages every four hours, is required whenever the previous day’s streamflow value (Q_{upstream}) is less than 22 cfs. All observations of streamflow and the results of streamflow calculations pursuant to determining compliance with this condition shall be available for review by MassDEP representatives at any time and shall be included in the Annual Statistical Report (ASR) submitted by Russell Biomass.

A daily withdrawal, greater than the sum of the three upstream streamflow gages minus 17.8 cfs, is not authorized by this permit and is prohibited by the regulations at 310 CMR 36.28. No withdrawal is permitted when Q_{upstream} is less than 17.8 cfs, calculated from the “real-time” observations once every four hours.

Table 3: Maximum Daily Withdrawal Volumes

Withdrawal Point Name	Maximum Daily Rate
Westfield River Diversion	0.885 MGD ³
Westfield River Diversion	$Q_{\text{upstream}} - 17.8 \text{ cfs}$

³ This is the maximum authorized withdrawal rate when the Westfield River streamflow, as measured by the three upstream USGS streamflow gages is greater than or equal to 19.2 cfs, calculated from the “real-time” observations every four hours.

3. Water Conservation Requirements

Russell Biomass shall submit a water conservation plan, considering all facility water use within 30 days prior to any withdrawal authorized by this permit. Russell Biomass shall implement its water conservation plan as approved by MassDEP.

4. Metering

All water withdrawn from the approved withdrawal points must be metered and the volumes determined with an accuracy $\pm 2.5\%$ of the actual volume. All meters must be installed prior to any withdrawal authorized by this permit.

5. Requirement to Report Raw Water Volumes

Russell Biomass shall install a continuous analyzing water meter as proposed in the permit application prior to making any water withdrawal from the withdrawal point. Russell Biomass shall calibrate its meter annually or more frequently as the manufacturer may indicate. Russell Biomass is required to report its daily maximum withdrawal volumes and total monthly withdrawal volumes annually as required by MassDEP on its Annual Statistical Report form.

6. Wastewater Discharge

Russell Biomass shall not withdraw water in volumes that exceed the WMA threshold from its authorized withdrawal point without a valid National Pollutant Discharge Elimination System (NPDES) permit for wastewater discharge to the Westfield River in Russell, MA.

7. Operational Flow Monitoring Procedures

Russell Biomass submitted a memo entitled “Review of USGS Flow Data for Operational Compliance” containing a set of “Draft Operational Flow Monitoring Guidance” (Operational Procedures) as part of the permitting process that details the logistics of how it will comply with the withdrawal limitations and the associated monitoring and reporting requirements. The Operational Procedures are included as an appendix (Appendix A) as a reference. The conditions and provisions in this permit supercede any requirements or responsibilities contained in the Operational Procedures.

GENERAL PERMIT CONDITIONS (applicable to all Permittees)

If any apparent conflict arises between the Special Conditions and the General Conditions, the Special Condition will prevail.

1. **Duty to Comply** The Permittee shall comply at all times with the terms and conditions of this permit, the Act and all applicable State and Federal statutes and regulations.
2. **Operation and Maintenance** The Permittee shall at all times properly operate and maintain all facilities and equipment installed or used to withdraw water so as not to impair the purposes and interests of the Act.
3. **Entry and Inspections** The Permittee or the Permittee's agent shall allow personnel or authorized agents or employees of MassDEP to enter and examine any property for the purpose of determining compliance with this permit, the Act or the regulations published pursuant thereto, upon presentation of proper identification and an oral statement of purpose.
4. **Water Emergency** Withdrawal volumes authorized by this permit are subject to restriction in any water emergency declared by MassDEP pursuant to M.G.L. c. 21G §§ 15-17, M.G.L. c. 150 § 111, or any other enabling authority.
5. **Transfer of Permits** This permit shall not be transferred in whole or in part unless and until MassDEP approves such transfer in writing, pursuant to a transfer application on forms provided by MassDEP requesting such approval and received by MassDEP at least thirty (30) days before the effective date of the proposed transfer. No transfer application shall be deemed filed unless it is accompanied by the applicable transfer fee established by 310 CMR 36.37.
6. **Duty to Report** The Permittee shall complete and submit annually, on a form provided by MassDEP, all of the information required by said form including, without limitation, a certified statement of the withdrawal. Such report shall be received by MassDEP by the date specified on the form each year. Such report must be mailed or hand delivered to:

Department of Environmental Protection
Drinking Water Program
Water Management Program
One Winter Street, 6th Floor
Boston, MA 02108

7. **Duty to Maintain Records** The Permittee shall maintain withdrawal records and other information in sufficient detail to demonstrate compliance with this permit.
8. **Metering** All withdrawal points included within the permit shall be metered within one year of the date of issuance of the permit. Meters shall be maintained and replaced as necessary to ensure the accuracy of the withdrawal records.

APPEAL RIGHTS AND TIME LIMITS

This permit is a decision of MassDEP. Any person aggrieved by this decision may request an adjudicatory hearing under the provisions of M.G.L. c. 30A. Any such request must be made in writing, by certified mail and received by MassDEP within twenty-one (21) days of the date of receipt of this permit. No request for an appeal of this permit shall be validly filed unless a copy of the request is sent by certified mail or delivered by hand to the local water resources management official in the city or town in

which the withdrawal point(s) is located; and for any person appealing this decision, who is not the applicant, unless such person notifies the permit applicant of the appeal in writing by certified mail or by hand within five (5) days of mailing the appeal to MassDEP.

CONTENTS OF HEARING REQUEST

310 CMR 1.01(6)(b) requires the request to include a clear and concise statement of the facts which are the grounds for the request and the relief sought. In addition, the request must include a statement of the reasons why the decision of MassDEP is not consistent with applicable rules and regulations, and for any person appealing this decision who is not the applicant, a clear and concise statement of how that person is aggrieved by the issuance of this permit.

FILING FEE AND ADDRESS

The hearing request, together with a valid check, payable to the Commonwealth of Massachusetts in the amount of \$100 must be mailed to:

Commonwealth of Massachusetts
Department of Environmental Protection
P.O. Box 4062
Boston, MA 02211

The request shall be dismissed if the filing fee is not paid, unless the appellant is exempt or granted a waiver as described below.

EXEMPTIONS

The filing fee is not required if the appellant is a city or town (or municipal agency), county, district of the Commonwealth of Massachusetts, or a municipal housing authority.

WAIVER

MassDEP may waive the adjudicatory hearing filing fee for any person who demonstrates to the satisfaction of MassDEP that the fee will create an undue financial hardship. A person, seeking a waiver must file, together with the hearing request, an affidavit setting forth the facts, which support the claim of undue hardship.

Appendix A

OPERATIONAL FLOW MONITORING GUIDANCE

OPERATIONAL FLOW MONITORING GUIDANCE⁵

1. Establish two action levels: one to reduce water withdrawal from the river when the flow as measured by the three upstream gauges drops to 19.2 cfs; and the other to stop withdrawal when the flow drops below 17.8 cfs. Flow calculations are to be based on a 24 hour running average measured every 4 hours. When flows are below 19.2 cfs, the withdrawal shall not exceed the measured combined flows of the three gaging stations minus 17.8 cfs.
2. Assign facility personnel to review and record streamflow data in cubic feet per second (cfs) from the three upstream gaging stations using the USGS website, as described herein. File copies will be kept of all *logs* and records relative to the streamflow monitoring and reporting requirements to the MassDEP, as described herein.
3. From October 1 to July 1 of each year mean and minimum daily flows at the three upstream gauging stations will be recorded once per month.
4. From July 1 to October 1 of each year the reported provisional data for average daily flows from each of the three gauging stations will be recorded on a daily basis at the beginning of each day. The flow values from the three gauging stations will be added - if the total is more than 22 cfs no further recording or analysis is required for that day.

Note: If one or more of the three gauging stations is non-operational, "NA" will be entered in the log and a total flow value will not be calculated. Under this condition, MassDEP will be notified immediately and average daily flows from the operational gauging stations will be provided to MassDEP. MassDEP will provide guidance to RBM on how to manage the withdrawal at that time to insure protection of the streamflow and prevent unnecessary cessation of withdrawal. If MassDEP determines that the withdrawal must be curtailed or suspended, MassDEP will notify RBM of its decision verbally so that actions on the withdrawal may begin immediately, and follow up that notification in writing. If one or more gauging stations are non-operational for a period of three consecutive days, the assigned personnel will contact USGS via email to request a status on the gauging station operations, and the USGS response will be noted in the log. Assigned personnel will report these findings to MassDEP via e-mail.

5. Collection of real time data will be initiated once per 8-hour shift if the total daily mean flow for the three gaging stations is less than 22 cfs.
6. If the previous day mean daily flow is below 20 cfs assigned facility personnel will notify plant supervisor immediately and note in a log. The plant supervisor will begin plans for potential reduction in water withdrawal to be limited to the measured stream flow minus 17.8 cfs, as outlined in item 1 above, and assigned personnel will commence logging a 24-hour running average every 4 hours.

Note: If any of the provisional real time data from one or more of the three gaging stations appears unusual or potentially flawed when calculating the running 24 hour running average, note in log and contact MassDEP by e-mail. An example of unusual or

⁵ Draft by Tighe and Bond Engineers, January 24, 2008; modified by MassDEP.

potentially flawed data would be a large spike or reduction in flow values for one or more real time intervals that cannot be attributed to a significant rain event or any known discharge constraints at the upstream dams.

7. If the 24-hour running average falls below 19.2 cfs notify the plant supervisor immediately. The plant supervisor will be in charge of limiting pumping and for monitoring and reporting the reading from the pump(s) flow meter to confirm that the specified water withdrawal volume is not exceeded every 24 hours.

Note: Pumps are not planned to be equipped with variable speed drives, and it is assumed that the pump(s) will be equipped to pump at a rate of 750 gallons per minute. Operation of the pumps should be placed into an on-off mode until the 24 hour running average flow increases to above action 19.2 cfs. Water storage tank volume should be monitored carefully to assure that there is adequate volume available should it become necessary to go to a full plant shut down. All available water conservation measures should be initiated, including halting any routine service that can be postponed. Notify MassDEP by phone and by e-mail, and keep copies for file.

8. If the 24 hour running average river flow falls below 17.8 cfs facility personnel will notify plant supervisor immediately. The plant supervisor will be in charge of discontinuing water withdrawal. Water storage tank volume should be monitored very carefully. Notify MassDEP by phone and by e-mail.
9. Once the 24 hour running average rises above 17.8 cfs for a period of at least four hours, facility personnel will notify plant supervisor immediately to begin pumping at no more than the measured combined flows of the three gaging stations minus 17.8 cfs. Notify MassDEP by phone and by e-mail.
10. Once the 24 hour running average river flow rises above 19.2 cfs for a period of at least four hours, facility personnel will notify plant supervisor immediately to resume normal pumping at a rate no greater than 0.885 mgd (1.37 cfs). Notify MassDEP by phone and by e-mail.
11. After an action level flow event, continue monitoring real time flow once per 8-hour shift for at least two days after the event. Then continue with monitoring daily mean flow data per normal operations.